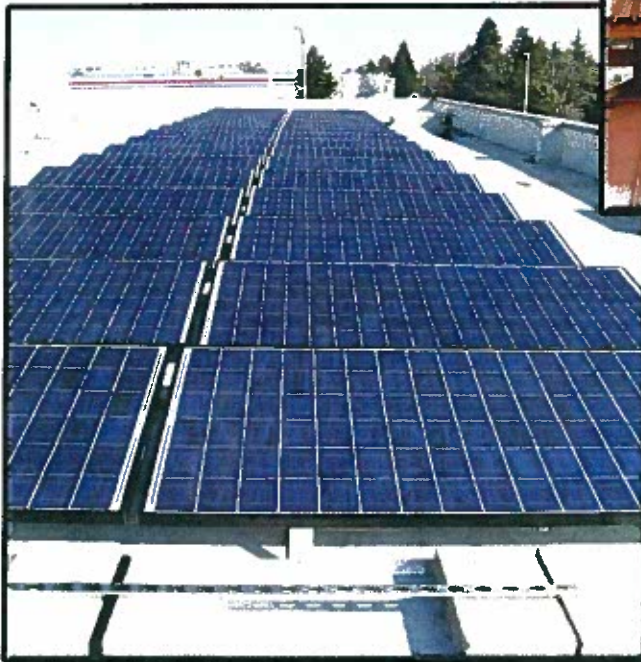
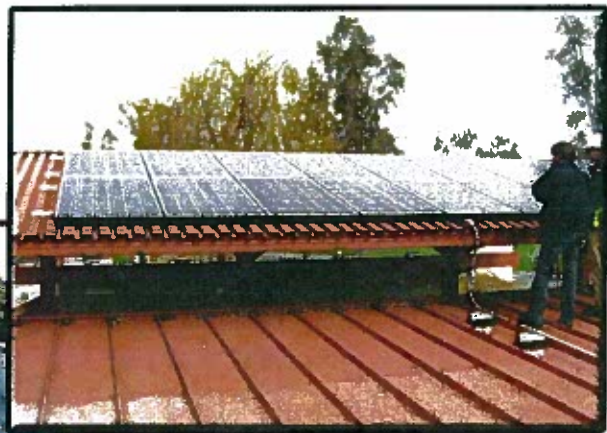


Clean Renewable Energy Bonds Program 2011 Annual Report



Elk Grove Maintenance Station



Willows Safety Roadside Rest Area

Prepared by:

*Division of Business, Facilities and Security
1120 N Street
Sacramento, California
April 2011*



Edmund G. Brown Jr., Governor

**Clean Renewable Energy Bonds Program
2011 Annual Report
April 2011**

EXECUTIVE SUMMARY

Introduction

California Streets and Highway Codes section 157.8 requires the California Department of Transportation (Caltrans) to annually report to the budget committees of each house of the Legislature with regard to the issuance of Clean Renewable Energy Bonds (CREBs) for financing the acquisition and installation of photovoltaic (solar) energy systems until maturity of the bonds.

The CREBs Report includes the status of each facility on which Caltrans has installed photovoltaic energy systems as part of the CREBs Program; an accounting of the costs for each photovoltaic energy system installed or acquired by the Department; a description of the energy savings Caltrans has achieved by acquiring or installing a photovoltaic energy system; and a review and analysis of the expected cost savings at the time of issuance of the bonds versus actual annual savings.

Background

The CREBs Program was authorized as part of the Tax Incentives Act of 1995, which was passed by the United States Congress to encourage energy conservation, to develop energy infrastructure and increase domestic energy production and the use of alternative energy sources.

The CREBs Program is administered by the United States Internal Revenue Service (IRS). CREBs are a form of tax credit bonds in which interest on the bonds is paid in the form of tax credits by the United States government. The proceeds for the issuance of the CREBs are available to finance renewable energy and clean coal facilities' projects.

On November 13, 2006, the IRS approved 93 CREBs applications submitted by the Department, with a total value of \$45.6 million. Caltrans subsequently initiated efforts to re-evaluate and approve facilities for soundness of the concept and adjusted the scope as necessary at each facility. The re-evaluation criteria consisted of the age and condition of the roof and design; the long-term building retention; structural integrity; and a cost-benefit analysis. Through this process, the number of photovoltaic projects was reduced to 70, with construction and installation costs estimated at \$19.9 million.

A Banc of America Bond sale for capital outlay costs was obligated for a total of \$20 million, plus interest (1.45% rate) of \$2.2 million.

CREBs PROGRAM

Overview

Caltrans is installing photovoltaic energy systems on 70 building sites throughout the state under the CREBs Program. The goal is to generate over 2.4 megawatts (MW) of energy (see Appendix, Exhibit 1). The photovoltaic panels have a life expectancy of at least 25 years. The installation of the photovoltaic energy systems will help Caltrans meet energy conservation goals outlined in Former Governor Arnold Schwarzenegger's Executive Order (EO) S-20-04 dated December 14, 2004. This order targets a 20 percent reduction in grid-based energy savings for state-owned buildings by 2015.

A listing of Caltrans' 70 photovoltaic installation projects at various transportation facilities, as well as the installation dates (see Appendix, Exhibit 1). The breakdown of the installation of photovoltaic energy systems by facility type is displayed below.

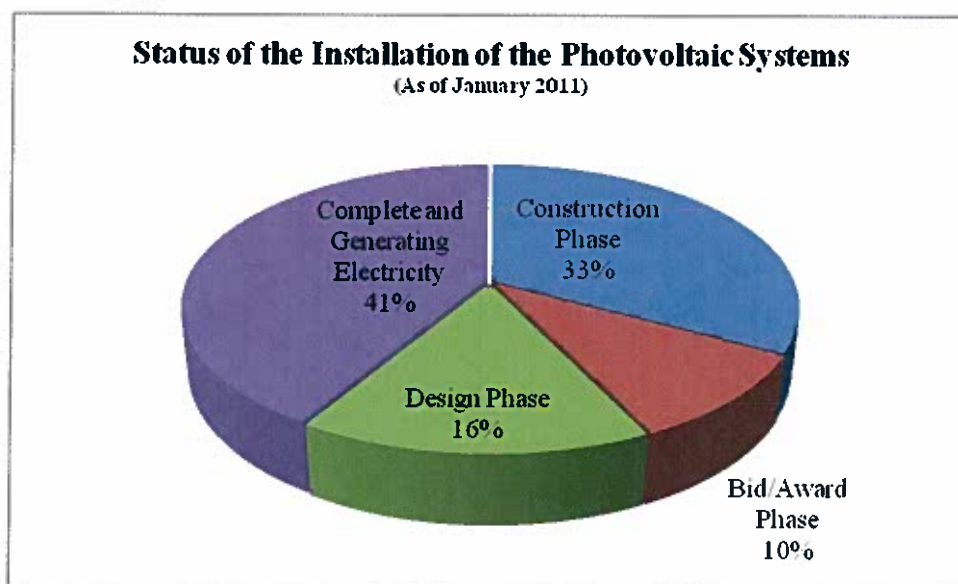
<u>Facility Type</u>	<u>Number of Projects</u>
Maintenance Facilities	46
Equipment Shops	9
Safety Roadside Rest Areas	3
Office Buildings	4
Materials Laboratories	2
Transportation Management Centers	2
Toll Bridge Facilities	2
Truck Inspection Facilities	2
<u>TOTAL</u>	<u>70</u>

Status of Projects

The financial success of CREBs was based on a 15-year or 16-year bond term. Due to fluctuations in the United States Department of Treasury bond rate in Fiscal Year 2008-09, the sale of the CREBs was delayed from December 2008 to June 2009 when the bond term rose to 15 years. This caused Caltrans to revise the original construction schedule to reflect the completion of 35 photovoltaic projects by June 2010 and the remaining projects by December 2010. There are other factors that have caused delays in the original delivery schedule of the CREBs projects by an additional 13 months. The major factors impacting the delivery of the CREBs projects are as follows:

- Fluctuations in the United States Department of Treasury bond rate and term required waiting for favorable terms to sell bonds
- State-mandated furloughs reduced staff time by almost 15 percent to work on the design, contract, and project management of the CREBs projects
- Issues associated with encouraging small businesses to contract with the State of California
- Unforeseen and unplanned environmental requirements
- Substitution of eight new sites when the original sites were determined in the design phase to not be viable
- Delay in execution of contracts due to the state budget impasse
- Nationwide shortage of photovoltaic equipment.

A summary chart of the status of the installation of the photovoltaic energy systems is displayed below. As of January 2011, a total of 29 of the 70 projects was complete and generating electricity. It is anticipated that a total of 59 of the 70 projects will be completed by December 2011, and the remaining projects will be completed in January 2012.



BUDGET

Original Cost Benefit Analysis

Caltrans examined the cost effectiveness and viability of each project. Financial factors that were considered for each project included energy consumption and the average cost of the utility-provided electricity for the facility. This data was compared with industry averages for the cost to install roof-mounted photovoltaic energy systems for the required kilowatts of electricity at each facility. As a result, Caltrans estimated a utility savings of approximately

\$24.7 million over 15 years with a bond debt service payment of \$22.2 million (see Appendix, Exhibit 2).

Revised Cost Benefit Analysis

Because the sites generating power just recently became operational, sufficient data of the actual energy generated to accurately calculate the annual avoided cost of energy is not available at this time. Therefore, the revised cost benefit analysis was prepared utilizing a projection of the energy to be generated in order to estimate the annual avoided cost of energy.

In the revised cost benefit analysis, the annual avoided cost of energy was changed to reflect the guidelines and assumptions presented by the California Energy Commission in the photovoltaic installation guidelines titled, "A Guide to Photovoltaic System Design and Installation," dated June 2001. In addition, Caltrans elected to design, bid, and manage a CREBs project, which was instrumental in reducing the bond debt by approximately \$6 million to \$14 million. Caltrans' personnel cost to support the CREBs Program is projected to be approximately \$4 million. As a result, Caltrans estimates a utility savings of approximately \$11.2 million over the 15 years with a bond debt of \$15.6 million (see Appendix, Exhibit 3).

Comparison of the Original Cost Benefit Analysis and the Revised Cost Benefit Analysis

Due to Caltrans' limited knowledge of photovoltaic energy systems, the original cost benefit analysis did not account for all factors that affect the output of a photovoltaic energy system and economic benefits under variable weather conditions over time. Because the intensity of light on a surface varies throughout a day, as well as day to day, the actual output of a photovoltaic energy system can vary substantially. Therefore, to obtain a more realistic expectation of the overall system output and economic benefits, calculations were adjusted in the revised cost benefit analysis utilizing the guidelines provided by the California Energy Commission (Commission), which consider factors such as standard test conditions, dirt and dust, temperature, and sun angle and building orientation.

The original Cost Benefit Analysis Annual Avoided Cost calculation was based on an average of eight hours of sunlight each day. Following the guidelines of the Commission report, the average time of sunlight each day was revised to approximately five hours each day.

Taking into account the various factors that the Commission has identified as affecting the output of a photovoltaic energy system and the delays in the original CREBs project delivery schedule, the following assumptions identified in the original cost benefit analysis have changed:

- The total annual avoided cost differential changed from \$24.7 million to \$11.2 million over a 15-year period
- The bond debt service of \$22.2 million was reduced to \$15.6 million
- It will take an additional eight years to fund the bond debt service and cost associated with the photovoltaic systems (14 years revised to 22 years).

CONCLUSION

The CREBs Program was established to increase Caltrans' efforts towards energy conservation as outlined in EO S-20-04. This was to be accomplished by installing photovoltaic energy systems on Caltrans-owned facilities at a cost of \$20 million and financed through a 1.45 percent interest CREB. It was Caltrans' anticipation that the CREBs Program would begin generating electricity one year after the sale of the bond and that the bond debt service be fully paid through avoided energy cost before the maturity of the bond.

Although Caltrans has not met the original objective of the CREBs Program, after 25 years and the bond debt and cost associated with the photovoltaic projects are paid off, it is projected that Caltrans will save \$4.6 million. The photovoltaic projects increase the departmental efforts towards energy conservation as outlined in EO S-20-04 and support the state's renewable power statutes, "green power," electric grid demand, energy conservation, Leadership in Energy and Environmental Design (LEED), and climate change mandates.

As Governor Edmund G. Brown Jr. stated in his inaugural address, "we can be proud that our state leads the rest of the country in our commitment to new forms of energy and energy efficiency." In Brown's campaign Web site titled "Jobs for California's Future" and in his inaugural address, he commits to the goal to have 20,000 megawatts of renewable energy by 2020. Caltrans' CREBs Program supports the Governor's goal of stimulating the economy by creating jobs and producing renewable electricity, as well as, identifying valuable lessons learned for future California photovoltaic installation projects (see Appendix, Exhibit 4). The 2.4 megawatts of solar power that Caltrans' 70 sites are expected to produce can power approximately 500 homes.

APPENDIX

Exhibit

- 1 California Department of Transportation Clean Renewable Energy Bonds Projects
- 2 CREBs 15-Year Bond Term (Original Cost Benefit Analysis)
- 3 CREBs 15-Year Bond Term (Revised Cost Benefit Analysis)
- 4 CREBs Lessons Learned

**California Department of Transportation
Clean Renewable Energy Bonds Projects**

Num	District	Project	City	Project Cost			kW AC	Date Began Gen Power	Date Projected Gen Power
				Actual	Estimated	Total			
1	3	Elk Grove Maintenance Station	Elk Grove	\$91,423	\$0	\$91,423	15.0	5/6/2010	
2	3	Willows SRRA	Glenn County	\$24,914	\$0	\$24,914	3.0	5/6/2010	
3	3	Sunrise Maintenance Station	Rancho Cordova	\$193,402	\$0	\$193,402	30.0	5/25/2010	
4	3	District 3 - Maint. Facility 2	Chico	\$124,499	\$0	\$124,499	23.0	7/22/2010	
5	4	District 4 - Maint. Facility 3	Cupertino	\$142,105	\$0	\$142,105	20.0	7/1/2010	
6	10	John C. Erreca SRRA	Merced County	\$45,557	\$0	\$45,557	9.0	7/19/2010	
7	6	Porterville Maintenance Station	Porterville	\$92,581	\$0	\$92,581	15.8	8/9/2010	
8	5	District 5 - Maint. Facility 5	Santa Maria	\$100,531	\$0	\$100,531	15.0	8/22/2010	
9	5	District 5 - Maint. Facility 2	Monterey	\$40,276	\$0	\$40,276	13.0	8/19/2010	
10	4	District 4 - Maint. Facility 19	Walnut Creek	\$117,258	\$0	\$117,258	20.0	9/11/2010	
11	4	Equipment Building #7	San Leandro	\$155,285	\$0	\$155,285	45.0	9/15/2010	
12	6	District 6 - Maint. Facility 2	Delano	\$130,709	\$0	\$130,709	20.0	10/1/2010	
13	6	Lebec Maintenance Station	Lebec	\$116,986	\$0	\$116,986	15.8	10/4/2010	
14	6	District 6 Office Building	Fresno	\$265,404	\$0	\$265,404	89.3	10/20/2010	
15	6	District 6 - Maint. Facility 3	Fresno	\$140,594	\$0	\$140,594	22.0	11/1/2010	
16	6	Equipment Building #11	Fresno	\$133,356	\$0	\$133,356	35.0	11/3/2010	
17	2	Burney Maintenance Station	Burney	\$185,877	\$0	\$185,877	30.0	11/15/2010	
18	3	Equipment Building #5	Mayesville	\$295,293	\$0	\$295,293	92.2	11/16/2010	
19	6	Equipment Building #12	Bakersfield	\$218,900	\$0	\$218,900	42.0	12/2/2010	
20	11	District 11 - Maint. Facility 4	San Diego	\$180,000	\$0	\$180,000	35.7	12/7/2010	
21	10	Westley SRRA	Stanislaus County	\$131,000	\$0	\$131,000	14.0	11/30/2010	
22	4	District 4 - Maint. Facility 8	Hercules	\$114,565	\$0	\$114,565	12.0	12/15/2010	
23	4	District 4 - Maint. Facility 6	Gilroy	\$52,400	\$0	\$52,400	7.0	12/16/2010	
24	9	District 9 - Maint. Facility 1	Bishop	\$186,600	\$0	\$186,600	35.0	12/16/2010	
25	6	District 6 - Maint. Facility 4	Visalia	\$226,200	\$0	\$226,200	30.0	1/17/2011	
26	9	District 9 Office Building	Bishop	\$444,200	\$0	\$444,200	89.3	1/19/2011	
27	7	District 7 - Maint. Facility 10	Tarzana	\$68,100	\$0	\$68,100	10.0	1/25/2011	
28	3	District 3 - Maint. Facility 1	Auburn	\$114,700	\$0	\$114,700	20.0	1/26/2011	
29	7	District 7 - Maint. Facility 1	Altadena	\$143,300	\$0	\$143,300	20.0	1/25/2011	
30	3	Main Lab Bldg (Translab) (New Warehouse) Phase I	Sacramento	\$706,000	\$0	\$706,000	135.0		2/28/2011
31	1	Bracut Maintenance Station	Eureka	\$256,300	\$0	\$256,300	50.0		2/28/2011
32	1	Equipment Building #1 (2101)	Eureka	\$176,900	\$0	\$176,900	30.0		2/28/2011
33	1	District 1 - Maint. Facility 1 (Annex)	Eureka	\$147,500	\$0	\$147,500	25.0		2/28/2011
34	7	Newhall Maintenance Station	Valencia	\$164,392	\$0	\$164,392	33.0		2/28/2011
35	9	Shoshone Maintenance Station	Shoshone	\$93,000	\$0	\$93,000	15.8		2/28/2011
36	8	Equipment Building #15	Barstow	\$202,600	\$0	\$202,600	30.0		3/31/2011
37	11	Equipment Building #18	San Diego	\$394,200	\$0	\$394,200	65.0		3/31/2011
38	7	District 7 - Maint. Facility 5	Monrovia	\$150,000	\$0	\$150,000	20.0		3/31/2011
39	12	District 12 - Maint. Facility 1	Orange	\$213,600	\$0	\$213,600	42.8		3/31/2011
40	4	District 4 - Maint. Facility 9	Napa	\$77,100	\$0	\$77,100	8.0		3/31/2011
41	7	District 7 - Maint. Facility 2	Camarillo	\$218,625	\$0	\$218,625	30.0		4/30/2011
42	1	District 1 Office Building	Eureka	\$366,900	\$0	\$366,900	75.0		4/30/2011
43	12	Costa Mesa Maintenance Station	Costa Mesa	\$223,200	\$0	\$223,200	42.8		5/31/2011
44	4	District 4 - Maint. Facility 15	San Leandro	\$176,900	\$0	\$176,900	30.0		5/31/2011
45	11	San Diego - Coronado Bridge	San Diego	\$206,000	\$0	\$206,000	47.6		5/31/2011
46	11	San Onofre SB I-5 Truck Inspection Facility	San Onofre	\$100,000	\$0	\$100,000	23.8		5/31/2011
47	7	District 7 - Maint. Facility 3	Commerce	\$163,300	\$0	\$163,300	36.5		5/31/2011
48	5	Equipment Building #10	San Luis Obispo	\$243,600	\$0	\$243,600	48.0		7/31/2011
49	4	District 4 - Maint. Facility 7	Hayward	\$167,200	\$0	\$167,200	30.0		7/31/2011
50	4	District 4 - Maint. Facility 2	Crockett	\$194,500	\$0	\$194,500	25.0		7/31/2011
51	4	South San Jose Maintenance Station	San Jose	\$177,800	\$0	\$177,800	30.0		7/31/2011
52	4	District 4 Maintenance Facility	Petaluma	\$135,200	\$0	\$135,200	30.0		7/31/2011
53	5	District 5 - Maint. Facility 4	Santa Barbara	\$0	\$125,000	\$125,000	15.0		7/31/2011
54	1	District 1 - Maint. Facility 3	Ukiah	\$0	\$179,474	\$179,474	25.0		8/31/2011
55	4	District 4 - Maint. Facility 1	Benicia	\$195,600	\$0	\$195,600	30.0		9/30/2011
56	10	Stockton Maintenance Station	Stockton	\$212,400	\$0	\$212,400	40.0		9/30/2011
57	5	District 5 - Maint. Facility 1	Buellton	\$0	\$135,000	\$135,000	15.0		9/30/2011
58	5	District 4 - Maint. Facility 17	Santa Cruz	\$0	\$114,000	\$114,000	15.0		9/30/2011
59	5	District 5 Office Building	San Luis Obispo	\$0	\$528,000	\$528,000	73.5		1/1/2012
60	7	Chilao Maintenance Station	La Canada	\$82,400	\$0	\$82,400	12.0		1/1/2012
61	2	Quincy Maintenance Station	Quincy	\$0	\$217,000	\$217,000	30.0		1/1/2012
62	11	Calexico NB Truck Inspection Facility	Herber	\$0	\$106,000	\$106,000	15.0		1/1/2012
63	8	District 8 - Maint. Facility 1	Riverside	\$0	\$191,000	\$191,000	30.0		1/1/2012
64	4	Antioch Bridge Toll Plaza	Antioch	\$0	\$245,100	\$245,100	35.0		1/1/2012
65	3	Main Lab Bldg (Translab) (Exist Geotech & Structure Materials) Phase II	Sacramento	\$0	\$500,000	\$500,000	95.0		1/1/2012
66	12	TMC #6	Irvine	\$0	\$277,000	\$277,000	39.8		1/1/2012
67	12	District 12 Maint. Facility	Orange	\$0	\$350,000	\$350,000	50.0		1/1/2012
68	7	District 7 Maint. Facility	Long Beach	\$0	\$267,000	\$267,000	45.0		1/1/2012
69	11	TMC #5	San Diego	\$0	\$375,100	\$375,100	50.0		1/1/2012
70	3	Division of Equipment Building	Sacramento	\$0	\$675,100	\$675,100	90.0		1/1/2012
TOTALS:				\$9,721,232	\$4,284,774	\$14,006,006	2,436.7		

CREBs 15-Year Bond Term (Original Cost Benefit Analysis)

Fiscal Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Total (Yr 1-8)
Annual Avoided Cost	\$403,457	\$1,237,411	\$1,389,299	\$1,444,871	\$1,502,666	\$1,562,772	\$1,625,283	\$1,690,295	\$10,856,054
DOT Cost (Maint.)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
State Highway Acct	\$925,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$925,000
Bond Debt Payment	(\$1,482,351)	(\$1,604,000)	(\$1,584,667)	(\$1,565,333)	(\$1,546,000)	(\$1,526,667)	(\$1,507,333)	(\$1,488,000)	(\$12,304,361)
Bond Cost	(\$298,750)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$438,750)
Net Avoided Cost	\$452,654	\$386,589	\$215,368	\$140,462	\$63,334	\$16,105	\$97,950	\$182,295	\$962,057

Fiscal Year	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Total (Yr 1-15)
Annual Avoided Cost	\$1,757,906	\$1,828,223	\$1,901,352	\$1,977,406	\$2,056,502	\$2,138,762	\$2,224,312	\$24,740,517
DOT Cost (Maint.)	\$0	(\$300,000)	\$0	\$0	\$0	\$0	\$0	(\$300,000)
State Highway Acct	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$925,000
Bond Debt Payment	(\$1,468,667)	(\$1,449,333)	(\$1,430,000)	(\$1,410,668)	(\$1,391,333)	(\$1,372,000)	(\$1,352,667)	(\$22,179,029)
Bond Cost	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$578,750)
Net Avoided Cost	\$269,240	\$58,889	\$451,352	\$546,738	\$645,169	\$746,762	\$851,646	\$2,607,738

Assumptions:

1. CREBs anticipated to be sold by December 2008.
2. CREBs debt service payments begin in Fiscal Year 2009-2010 (Calendar Year 2009).
3. Year 1 is Fiscal Year 2009-10.
4. Photovoltaic maintenance cost estimated at \$300K every 10 years.
5. Bond costs will be funded either through rebates, bond proceeds or the Department of Transportation.

CREBs 15-Year Bond Term (Revised Cost Benefit Analysis)

Exhibit 3

Fiscal Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Total (Yr 1-8)
Annual Avoided Cost	\$0	\$190,783	\$570,805	\$692,203	\$719,891	\$748,687	\$778,634	\$809,780	\$4,510,783
DOT Cost (Support)	(\$2,000,000)	(\$1,500,000)	(\$500,000)						(\$4,000,000)
DOT Cost (Maint.)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
State Highway Acct	\$925,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$925,000
Bond Debt Payment	(\$1,482,361)	(\$1,604,000)	(\$1,584,667)	(\$978,333)	(\$966,250)	(\$954,167)	(\$942,083)	(\$930,000)	(\$9,441,861)
STO Bond Cost	(\$298,750)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$438,750)
Net Avoided Cost	(\$2,856,111)	(\$2,933,217)	(\$1,533,862)	(\$306,130)	(\$266,359)	(\$225,480)	(\$183,449)	(\$140,220)	(\$8,444,828)

Fiscal Year	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Total (Yr 1-15)
Annual Avoided Cost	\$842,171	\$875,858	\$910,892	\$947,328	\$985,221	\$1,024,630	\$1,065,615	\$11,162,496
DOT Cost (Support)								(\$4,000,000)
DOT Cost (Maint.)	\$0	\$0	\$0	(\$150,000)	(\$150,000)	\$0	\$0	(\$300,000)
State Highway Acct	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$925,000
Bond Debt Payment	(\$917,917)	(\$905,833)	(\$893,750)	(\$881,667)	(\$869,583)	(\$857,500)	(\$845,417)	(\$15,613,528)
STO Bond Cost	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$20,000)	(\$578,750)
Net Avoided Cost	(\$95,746)	(\$49,976)	(\$2,858)	(\$104,339)	(\$54,363)	\$147,130	\$200,198	(\$8,404,782)

Fiscal Year	2024-25	2025-26	2026-27	2027-28	2028-29	Total (Yr 1-20)
Annual Avoided Cost	\$1,108,239	\$1,152,569	\$1,198,672	\$1,246,618	\$1,296,483	\$17,165,077
DOT Cost (Support)						(\$4,000,000)
DOT Cost (Maint.)	\$0	\$0	\$0	\$0	\$0	(\$300,000)
State Highway Acct	\$0	\$0	\$0	\$0	\$0	\$925,000
Bond Debt Payment	\$0	\$0	\$0	\$0	\$0	(\$15,613,528)
STO Bond Cost	\$0	\$0	\$0	\$0	\$0	(\$578,750)
Net Avoided Cost	\$1,108,239	\$1,152,569	\$1,198,672	\$1,246,618	\$1,296,483	(\$2,402,201)

Fiscal Year	2029-30	2030-31	2031-32	2032-33	2033-34	Total (Yr 1-25)
Annual Avoided Cost	\$1,348,343	\$1,402,276	\$1,458,367	\$1,516,702	\$1,577,370	\$24,466,135
DOT Cost (Support)						(\$4,000,000)
DOT Cost (Maint.)	\$0	(\$150,000)	(\$150,000)	\$0	\$0	(\$600,000)
State Highway Acct	\$0	\$0	\$0	\$0	\$0	\$925,000
Bond Debt Payment	\$0	\$0	\$0	\$0	\$0	(\$15,613,528)
STO Bond Cost	\$0	\$0	\$0	\$0	\$0	(\$578,750)
Net Avoided Cost	\$1,348,343	\$1,252,276	\$1,308,367	\$1,516,702	\$1,577,370	\$4,600,858

Interest = 1.45%

Assumptions:

1. CREBs sold June 10, 2009.
2. CREBs debt service payments began in Fiscal Year 2009-2010 (December 15, 2009).
3. State Treasurer's Office (STO)
4. Photovoltaic maintenance cost estimated at \$300K every 10 years (Years 10 and 20).
5. Bond costs will be funded either through rebates, bond proceeds or the Department of Transportation.
6. Photovoltaic Construction Cost = \$14 million